What is claimed is:

1.   An   image   status   estimating   method   for
estimating a status of an image, comprising:

5   dividing an image into a plurality of areas;
           computing a characteristic amount for each of
the plurality of areas; and
           computing a statistic amount for estimation of
the status of the image using the characteristic
10   amount.

2.   The method according to claim 1, wherein
       said image is divided according to tone level
information of a pixel forming the image.

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3.   The method according to claim 1, wherein
       said statistic amount is computed using the
characteristic amount for each said area and a
weight coefficient corresponding to each said area.

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4.   The method according to claim 3, wherein
       said statistic amount is obtained by adding
the weight coefficient for each said area as a
weight and computing a weighted average value
25   between areas of the characteristic amount.

5.   The method according to claim 3, wherein said statistic amount is obtained by adding the weight coefficient for each said area as a weight and computing standard deviation of the characteristic amount.

6.   The method according to claim 3, wherein said weight coefficient is determined based on a number of pixels forming a corresponding the area.

7.   The method according to claim 6, wherein when the number of pixels forming the area is smaller than a predetermined threshold, a weight coefficient for the area is set to 0.

8.   The method according to claim 3, wherein said weight coefficient is determined corresponding to the area in a corresponding position on the image.

9.   The method according to claim 8, wherein when the position of the area is closer to a center of the image, the weight coefficient for the area is set to a larger value.

10.   The method according to claim 1, wherein

a tone level of a pixel forming part of the image is converted into a brightness value, and the characteristic amount is computed using the conversion result.

11.   The method according to claim 1, wherein

a tone level of a pixel forming part of the image is converted into a chroma value, and the characteristic amount is computed using the conversion result.

12.   The method according to claim 1, wherein

characteristic amounts corresponding to respective pixels forming the image are averaged, and the characteristic amount is computed using an obtained average value.

13.   The method according to claim 1, wherein

said image is divided into a plurality of areas according to tone level information and positional information about pixels forming the image.

14.   An image correcting method for correcting an original image, comprising:

dividing an image into a plurality of areas;

computing a characteristic amount for each of

5   the plurality of areas;

computing a statistic amount for estimation of the status of the image using the characteristic amount;

comparing the computed statistic amount with a

10   predetermined value;

determining a correcting parameter based on the comparison result; and

correcting the original image using the correcting parameter.

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15.   An image correcting method for correcting an original image, comprising:

generating a plurality of corrected images by correcting the original image using a plurality of

20   different correcting parameters;

dividing the plurality of corrected images respectively into a plurality of areas;

computing characteristic amounts for the plurality of areas corresponding to the plurality

25   of corrected images;

computing a statistic amount indicating a status of a corrected image using the characteristic amount for the plurality of corrected images; and

5   defining a corrected image obtained using a correcting parameter corresponding to a statistic amount closest to a predetermined value among the computed statistic amounts as an appropriate corrected image.

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16. An image correcting method for correcting an original image, comprising:

a first step of generating a corrected image for the original image using any correcting
15   parameter;

a second step of dividing the corrected image into a plurality of areas;

a third step of computing a characteristic amount for each of the plurality of areas;

20   a fourth step of computing a statistic amount indicating a status of a corrected image using the characteristic amount;

a fifth step of defining the corrected image as an appropriate corrected image when the computed
25   statistic amount is close to a predetermined value,

generating a corrected image for the original image by changing a value of the correcting parameter when the computed statistic amount is not close to the predetermined value, and transferring control

5   to said second step.

17.   An image correction apparatus which corrects an original image, comprising:

        an area division unit dividing the original
10   image into a plurality of areas;

        a characteristic amount computation unit computing a characteristic amount for each of the plurality of areas;

        a statistic amount computation unit computing
15   a statistic amount indicating a status of an image using the characteristic amount;

        a correcting parameter setting unit comparing the computed statistic amount with a predetermined value, and determining a correcting parameter based
20   on a comparison result; and

        an image correction unit correcting the original image using the correcting parameter.

18.   The apparatus according to claim 17, further
25   comprising

a weight coefficient computation unit computing a weight coefficient for each area, wherein

said statistic amount computation unit computes the statistic amount using the characteristic amount for each area and the weight coefficient for each area.

19. An image correction apparatus which corrects an original image, comprising:

a first image correction unit correcting the original image using a plurality of correcting parameters and generating a plurality of corrected images;

an area division unit dividing each of the plurality of corrected images into a plurality of areas;

a characteristic amount computation unit computing a characteristic amount for each of the plurality of areas;

a statistic amount computation unit computing a statistic amount indicating a status of an image using the characteristic amount; and

a second image correction unit determining a corrected image obtained using the correcting

parameter corresponding to the statistic amount closest to a predetermined value among the plurality of computed statistic amounts as a correction result.

20. An image correction apparatus which corrects an original image, comprising:

an area division unit dividing the original image into a plurality of areas;

a first image correction unit correcting the original image divided into the plurality of areas using a plurality of correcting parameters, and generating a plurality of corrected images;

a characteristic amount computation unit computing a characteristic amount for each of a plurality of areas of the corrected images;

a statistic amount computation unit computing a statistic amount indicating a status of an image using the characteristic amount; and

a second image correction unit defining a corrected image obtained using the correcting parameter corresponding to a statistic amount closest to a predetermined value among the plurality of computed statistic amounts as a correction result.

21. An image correction apparatus which corrects an original image, comprising:

an area division unit dividing the original image into a plurality of areas;

a characteristic amount computation unit computing a characteristic amount for each of the plurality of areas;

a characteristic amount correction unit correcting the characteristic amount using a plurality of correcting parameters, and generating a plurality of corrected characteristic amounts;

a statistic amount computation unit computing a statistic amount indicating a status of an image using the corrected characteristic amount; and

an image correction unit correcting the original image using the correcting parameter corresponding to a statistic amount closest to a predetermined value.

22. An image correction apparatus which corrects an original image, comprising:

a correcting parameter setting unit setting a correcting parameter;

a first image correction unit correcting the original image using a correcting parameter set by said correcting parameter setting unit, and generating a corrected image;

5 an area division unit dividing the corrected image into a plurality of areas;

a characteristic amount computation unit computing a characteristic amount for each of the plurality of areas;

10 a statistic amount computation unit computing a statistic amount indicating a status of an image using the characteristic amount; and

a second image correction unit instructing said correcting parameter setting unit to set a new 15 correcting parameter if the computed statistic amount is closer to a predetermined value than a previously obtained statistic amount, and defining a corrected image obtained using the correcting parameter corresponding to the previously obtained 20 statistic amount as a correction result if the previously obtained statistic amount is closer to the predetermined value than the computed statistic amount.

25 23. An image correction apparatus which corrects

an original image, comprising:

an area division unit dividing the original image into a plurality of areas;

a correcting parameter setting unit setting a correcting parameter;

a first image correction unit correcting the original image divided into the plurality of areas using the correcting parameter set by said correcting parameter setting unit, and generating a corrected image;

a characteristic amount computation unit computing a characteristic amount for each of the plurality of areas of the corrected image;

a statistic amount computation unit computing a statistic amount indicating a status of an image using the characteristic amount; and

a second image correction unit instructing said correcting parameter setting unit to set a new correcting parameter if the computed statistic amount is closer to a predetermined value than a previously obtained statistic amount, and defining a corrected image obtained using the correcting parameter corresponding to the previously obtained statistic amount as a correction result if the previously obtained statistic amount is closer to

the predetermined value than the computed statistic amount.

24. An image correction apparatus which corrects an original image, comprising:

an area division unit dividing the original image into a plurality of areas;

a characteristic amount computation unit computing a characteristic amount for each of the plurality of areas;

a correcting parameter setting unit setting a correcting parameter;

an characteristic amount correction unit correcting the characteristic amount using the correcting parameter set by said correcting parameter setting unit, and generating a corrected characteristic amount;

a statistic amount computation unit computing a statistic amount indicating a status of an image using the corrected characteristic amount; and

a second image correction unit instructing said correcting parameter setting unit to set a new correcting parameter if the computed statistic amount is closer to a predetermined value than a previously obtained statistic amount, and defining

a corrected image obtained using the correcting parameter corresponding to the previously obtained statistic amount as a correction result if the previously obtained statistic amount is closer to the predetermined value than the computed statistic amount.

25. An image correction apparatus which corrects an original image, comprising:

area division means for dividing the original image into a plurality of areas;

characteristic amount computation means for computing a characteristic amount for each of the plurality of areas;

statistic amount computation means for computing a statistic amount indicating a status of an image using the characteristic amount;

correcting parameter setting means for comparing the computed statistic amount with a predetermined value, and determining a correcting parameter based on a comparison result; and

image correction means for correcting the original image using the correcting parameter.

26. An image correction apparatus which corrects

an original image, comprising:

first image correction means for correcting the original image using a plurality of correcting parameters and generating a plurality of corrected

5   images;

area division means for dividing each of the plurality of corrected images into a plurality of areas;

characteristic amount computation means for

10   computing a characteristic amount for each of the plurality of areas;

statistic amount computation means for computing a statistic amount indicating a status of an image using the characteristic amount; and

15   second image correction means for determining a corrected image obtained using the correcting parameter corresponding to the statistic amount closest to a predetermined value among the plurality of computed statistic amounts as a

20   correction result.

27.   An image correction apparatus which corrects an original image, comprising:

area division means for dividing the original

25   image into a plurality of areas;

first image correction means for correcting the original image divided into the plurality of areas using a plurality of correcting parameters, and generating a plurality of corrected images;

5   characteristic amount computation means for computing a characteristic amount for each of a plurality of areas of the corrected images;

statistic amount computation for computing a statistic amount indicating a status of an image 10   using the characteristic amount; and

second image correction means for defining a corrected image obtained using the correcting parameter corresponding to a statistic amount closest to a predetermined value among the 15   plurality of computed statistic amounts as a correction result.

28.   An image correction apparatus which corrects an original image, comprising:

20   area division means for dividing the original image into a plurality of areas;

characteristic amount computation means for computing a characteristic amount for each of the plurality of areas;

25   characteristic amount correction means for

correcting the characteristic amount using a plurality of correcting parameters, and generating a plurality of corrected characteristic amounts;

statistic amount computation means for computing a statistic amount indicating a status of an image using the corrected characteristic amount; and

image correction means for correcting the original image using the correcting parameter corresponding to a statistic amount closest to a predetermined value.

29. An image correction apparatus which corrects an original image, comprising:

correcting parameter setting means for setting a correcting parameter;

first image correction means for correcting the original image using a correcting parameter set by said correcting parameter setting means, and generating a corrected image;

area division means for dividing the corrected image into a plurality of areas;

characteristic amount computation means for computing a characteristic amount for each of the plurality of areas;

statistic amount computation means for computing a statistic amount indicating a status of an image using the characteristic amount; and

second image correction means for instructing said correcting parameter setting means to set a new correcting parameter if the computed statistic amount is closer to a predetermined value than a previously obtained statistic amount, and defining a corrected image obtained using the correcting parameter corresponding to the previously obtained statistic amount as a correction result if the previously obtained statistic amount is closer to the predetermined value than the computed statistic amount.

30. An image correction apparatus which corrects an original image, comprising:

area division means for dividing the original image into a plurality of areas;

correcting parameter setting means for setting a correcting parameter;

first image correction means for correcting the original image divided into the plurality of areas using the correcting parameter set by said correcting parameter setting means, and generating

a corrected image;

characteristic amount computation means for computing a characteristic amount for each of the plurality of areas of the corrected image;

5   statistic amount computation means for computing a statistic amount indicating a status of an image using the characteristic amount; and

second image correction means for instructing said correcting parameter setting means to set a
10   new correcting parameter if the computed statistic amount is closer to a predetermined value than a previously obtained statistic amount, and defining a corrected image obtained using the correcting parameter corresponding to the previously obtained
15   statistic amount as a correction result if the previously obtained statistic amount is closer to the predetermined value than the computed statistic amount.

20   31.   An image correction apparatus which corrects an original image, comprising:

area division means for dividing the original image into a plurality of areas;

characteristic amount computation means for
25   computing a characteristic amount for each of the

plurality of areas;

correcting parameter setting means for setting a correcting parameter;

characteristic amount correction means for correcting the characteristic amount using the correcting parameter set by said correcting parameter setting means, and generating a corrected characteristic amount;

statistic amount computation means for computing a statistic amount indicating a status of an image using the corrected characteristic amount; and

second image correction means for instructing said correcting parameter setting means to set a new correcting parameter if the computed statistic amount is closer to a predetermined value than a previously obtained statistic amount, and defining a corrected image obtained using the correcting parameter corresponding to the previously obtained statistic amount as a correction result if the previously obtained statistic amount is closer to the predetermined value than the computed statistic amount.

32. A computer-readable storage medium storing a

program used to direct a computer for estimating a status of an image to perform a process, comprising:

dividing an image into a plurality of areas;

computing a characteristic amount for each of the plurality of areas; and

computing a statistic amount for estimation of the status of the image using the characteristic amount.

33. A computer-readable storage medium storing a program used to direct a computer for correcting an original image to perform a process, comprising:

dividing an image into a plurality of areas;

computing a characteristic amount for each of the plurality of areas;

computing a statistic amount for estimation of the status of the image using the characteristic amount;

comparing the computed statistic amount with a predetermined value;

determining a correcting parameter based on the comparison result; and

correcting the original image using the correcting parameter.

34. A computer-readable storage medium storing a program used to direct a computer for correcting an original image to perform a process, comprising:

5   generating a plurality of corrected images by correcting the original image using a plurality of different correcting parameters;

      dividing the plurality of corrected images respectively into a plurality of areas;

10   computing characteristic amounts for the plurality of areas corresponding to the plurality of corrected images;

      computing a statistic amount indicating a status of a corrected image using the

15   characteristic amount for a plurality of corrected images; and

      defining a corrected image obtained using a correcting parameter corresponding to a statistic amount closest to a predetermined value among the

20   computed statistic amounts as an appropriate corrected image.